**Problem Statement : Anti Hostile Drone System**

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Build a drone system tailored for police operations to increase public safety, combat crime, and improve situational awareness. The system should use sensors, such as cameras (live footage camera and thermal imaging camera) and ultrasonic sensors, to gather information about the surroundings and provide real-time live footage and information to the user.

**Solution:**

1. **Aerial Surveillance**:

To maintain constant altitude sensors such as optic flow and lidar sensor, gyrometer, accelerometer and barometer should be used.

1. **Rapid Response**:

The brush less motor should be integrated in order increase the speed of response.

1. **Night Vision and Thermal Imaging:**

For night vision and thermal imaging, Infiray eye T3 sensor needs to be attached to the drone. AS it can sense temperatures ranging from 0 to 80 degree Celsius, it can even detect objects at an astounding distance of 1 km

1. **Crowd Monitoring:**

Implement AI algorithms for crowd monitoring

1. **Public Safety Support**:

Utilization of speakers to guide the public

1. **GPS Tracking and Geofencing**:

GPS module should be deployed to get the accurate location of the drone. The drone should be made in such a way that it should return to the place from where it started with just one click of a button.

**Software and Technology:**

1. **Programming Languages:**

Python

1. **Configuration and setup:**

Betaflight, Inav

1. **Tools:**

Open CV for computer vision

**Team Member & Responsibilities:**

* Yashash Sheshagiri – Drone Software
* Mohammed Daanish Shaikh – Building the Drone
* Mohammed Shoyeb Ansari – Sensor Software
* Nishchay Bhatia – Sensor Software

A diagram of a drone

Description automatically generated

**Flow Chart / Graphical Representation:**

**Schedule:**

January 5, 2023

December 24, 2023

December 18, 2023

Making of precise documentation of the solutions to the problems posted by hackathon authorities.

Making the ppt which explains all the steps required in the making of the drone.

Registering for the hackathon.